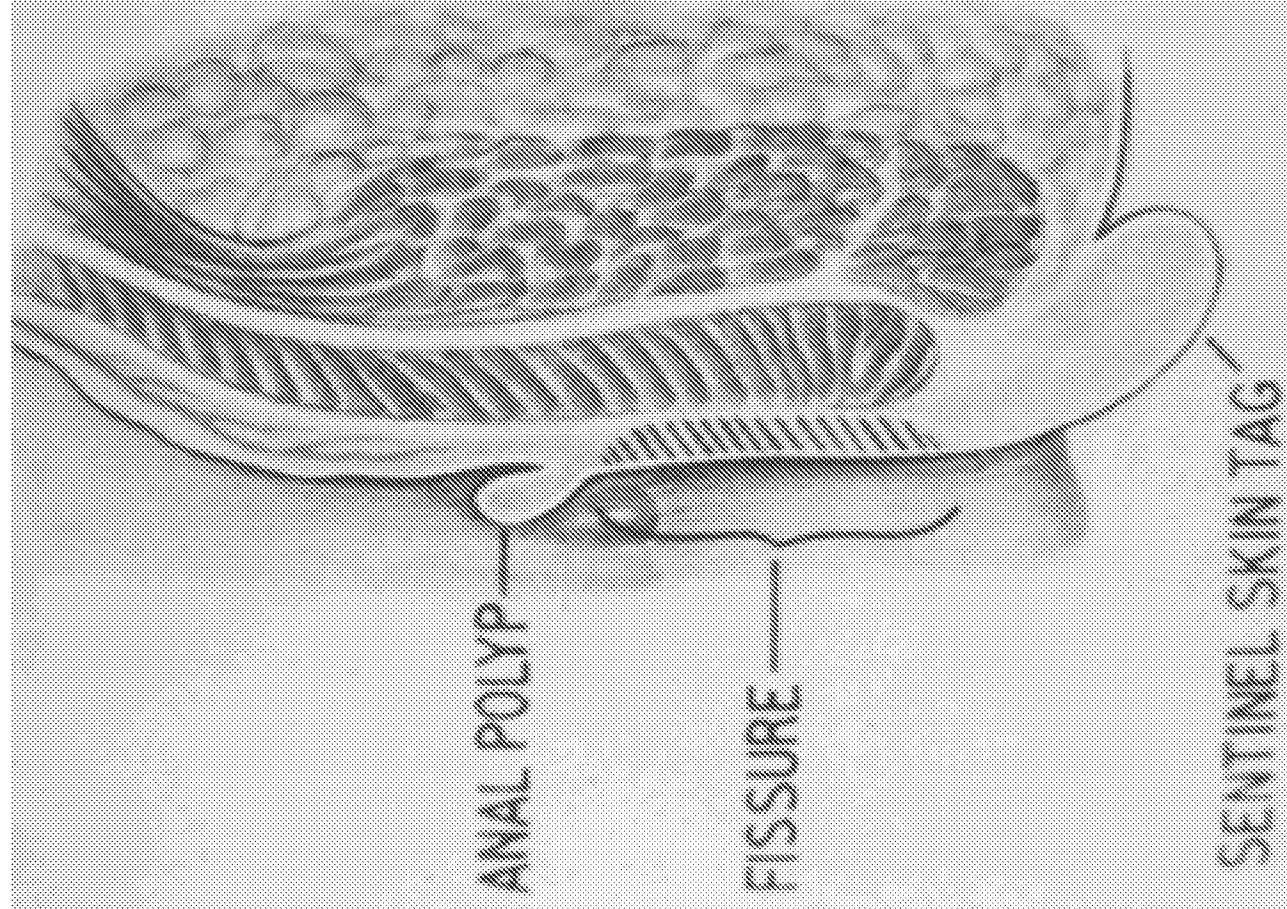


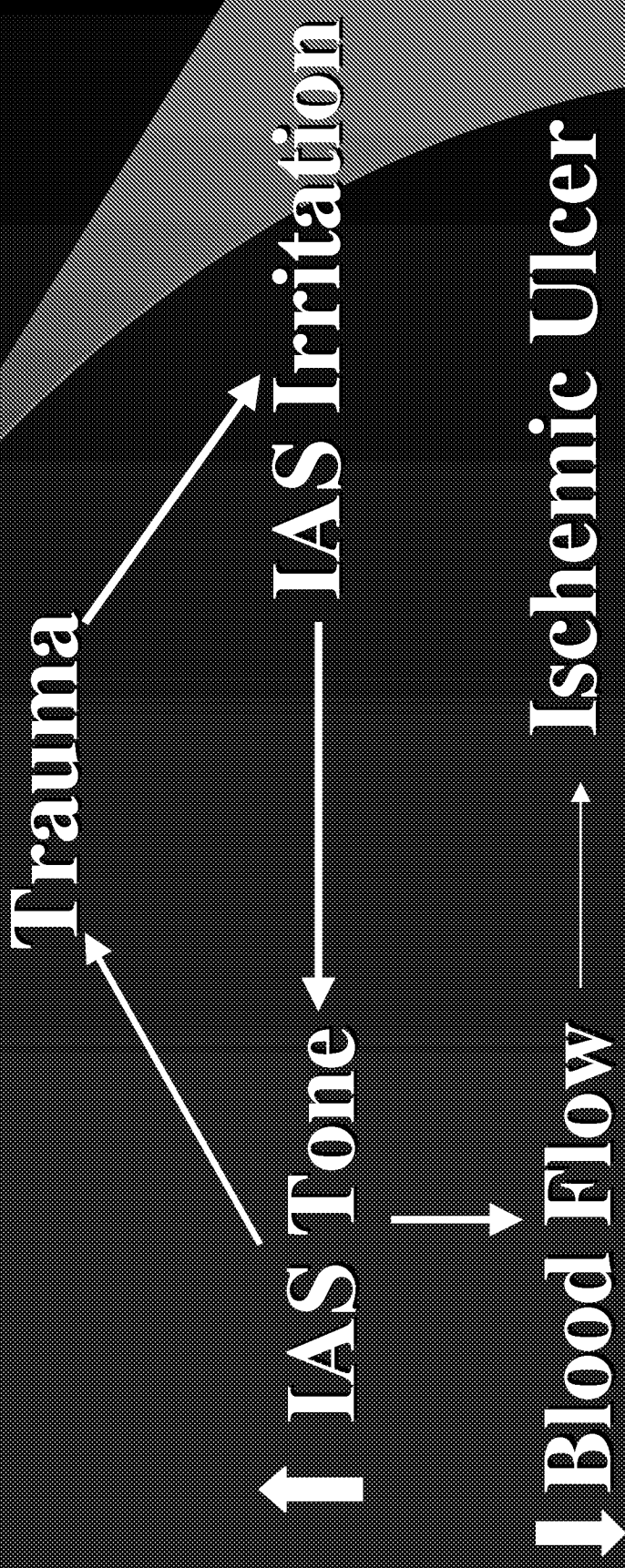
ANAL FISSURES


WHAT'S NEW AND WHAT'S OLD

GREGORY C. OLIVER, M.D., F.A.C.S.
ACS SPRING MEETING, 2002



Etiology of Anal Fissure





Anal Fissure

Chronic

Anal

Fissure



Healed Anal Fissure



Chronic Changes of Healed Anal Fissure

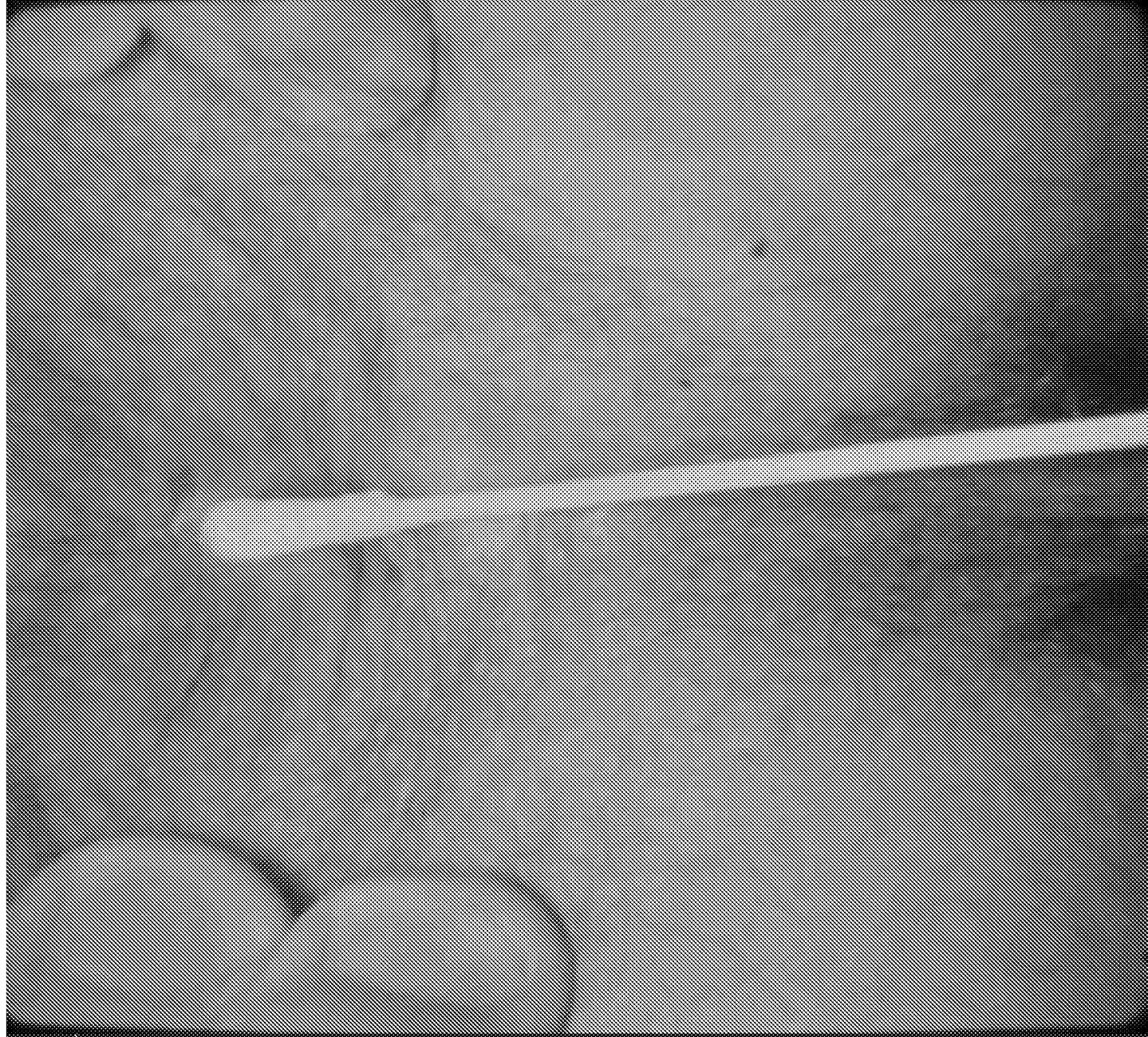


Acute Fissures

Medical Management

- TRADITIONAL
CONSERVATIVE TREATMENT
- WARM SOAKS
- EMOLLIENT SUPPOSITORIES
- WOUND CAUTERIZATION
- BULKING AGENTS

Fissure
Cautery
10% Silver
Nitrate



Acute Fissures

Medical Management

- NITROGLYCERIN 0.2%
- APPLICATION q 4-6 h
- SIDE EFFECTS LIMIT COMPLIANCE
- NIFEDIPINE OINTMENT 0.2%
- q 12 h REGIMEN
- SIDE EFFECTS MINIMAL

CHRONIC FISSURES

Surgical Options

- PLIS
- OPEN
- CLOSED
- ADVANCEMENT FLAPS
 - MUCOSAL
 - CUTANEOUS
 - PEDICLE FLAPS
 - SPHINCTER STRETCH

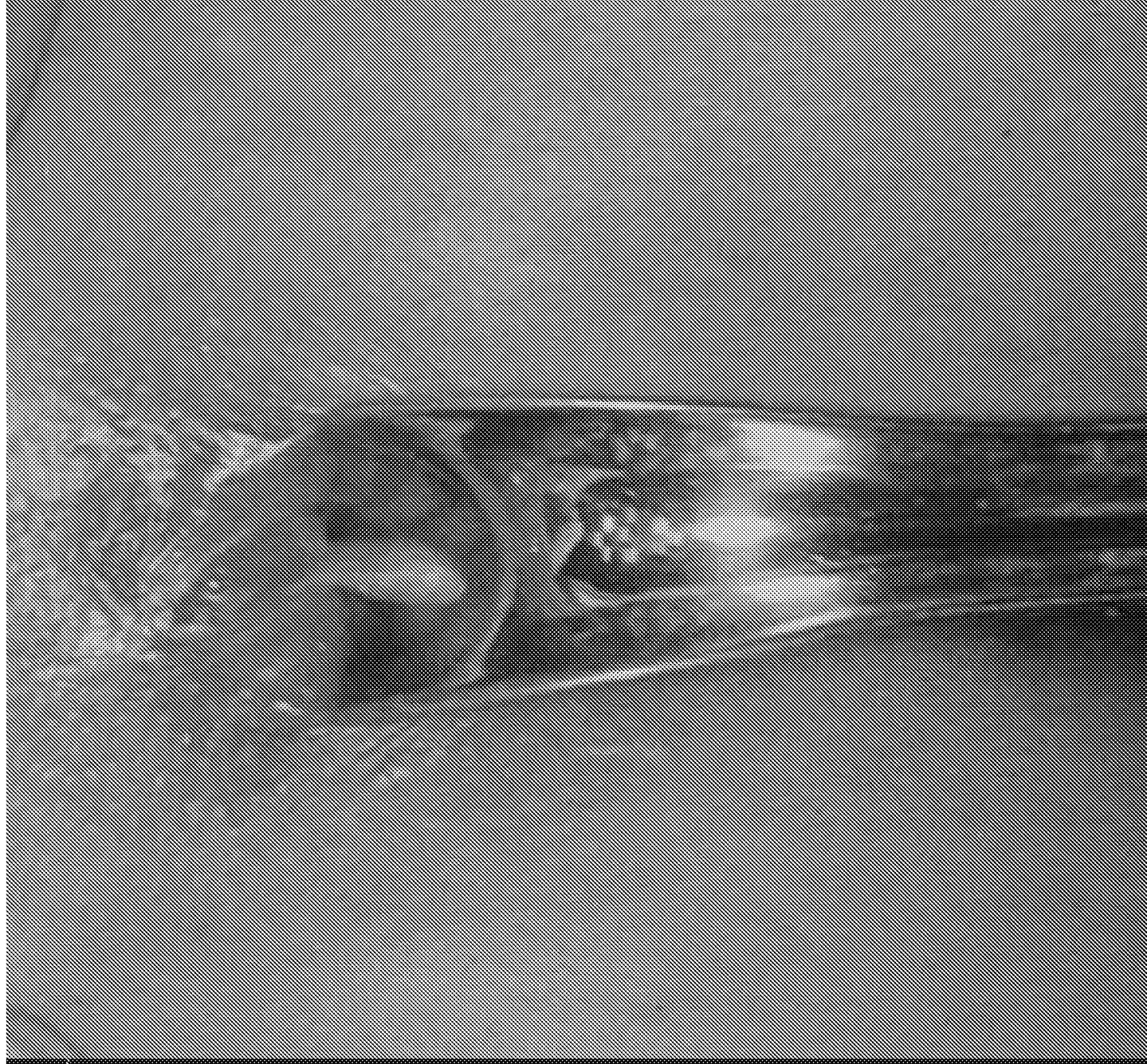
CHRONIC FISSURES

Medical Sphincterotomy: Botox

- PATIENT SELECTION
 - IBS ?
 - SPHINCTER DEFECTS ?
 - FREQUENT OR LOOSE BM'S ?
- GLOBAL SPHINCTER LAXITY ?



Chronic Anal Fissure



CHRONIC FISSURES

Medical Sphincterotomy: Botox

- PROCEDURE
- CONSCIOUS SEDATION
- ANAL BLOCK
- DEBRIDE WOUND
 - CONVERT CHRONIC STATE INTO ACUTE STATE
- INJECT BOTOX 30 UNITS

Injection of Internal Sphincter and Fissure



Treatment of Anal Fissure: Review of 902 Patients 1993-2002



Purpose

- To assess the efficacy of medical management for the treatment of acute anal fissures.

Methods

- Retrospective review of 1387 consecutive patients from 1/93 to 1/02.

Definition

- **Acute fissure**
 - Pain and bleeding less than 4 weeks
 - Superficial tear without signs of fibrosis

Definition

- **Chronic fissure**
 - Pain not as severe
 - Present for more than 4 weeks
 - Sentinel pile, hypertrophied anal papilla and fibrosis

Exclusion Criteria

- Chronic or healed fissure at presentation
- Fissures related to other anorectal pathology (primary pruritus ani, condylomata etc..) or surgery (hemorrhoidectomy, fistulotomy etc..)
- Fissures related to IBD or malignancy

Treatment Groups

- Silver nitrate (10%) cauterization, suppositories, sitz baths and bulking agents (CS)
- Nitroglycerin ointment (0.2%) (NTG)
- Nifedipine ointment (0.2%) (NIF)
- Botulinum toxin (30 u) (Botox)

Treatment Outcomes

6 Weeks

- **Success:** healing without recurrence
- **Recurrence:** healing with treatment and then development of a new fissure
- **No response:** no improvement at 6 weeks or a required change in treatment modality.

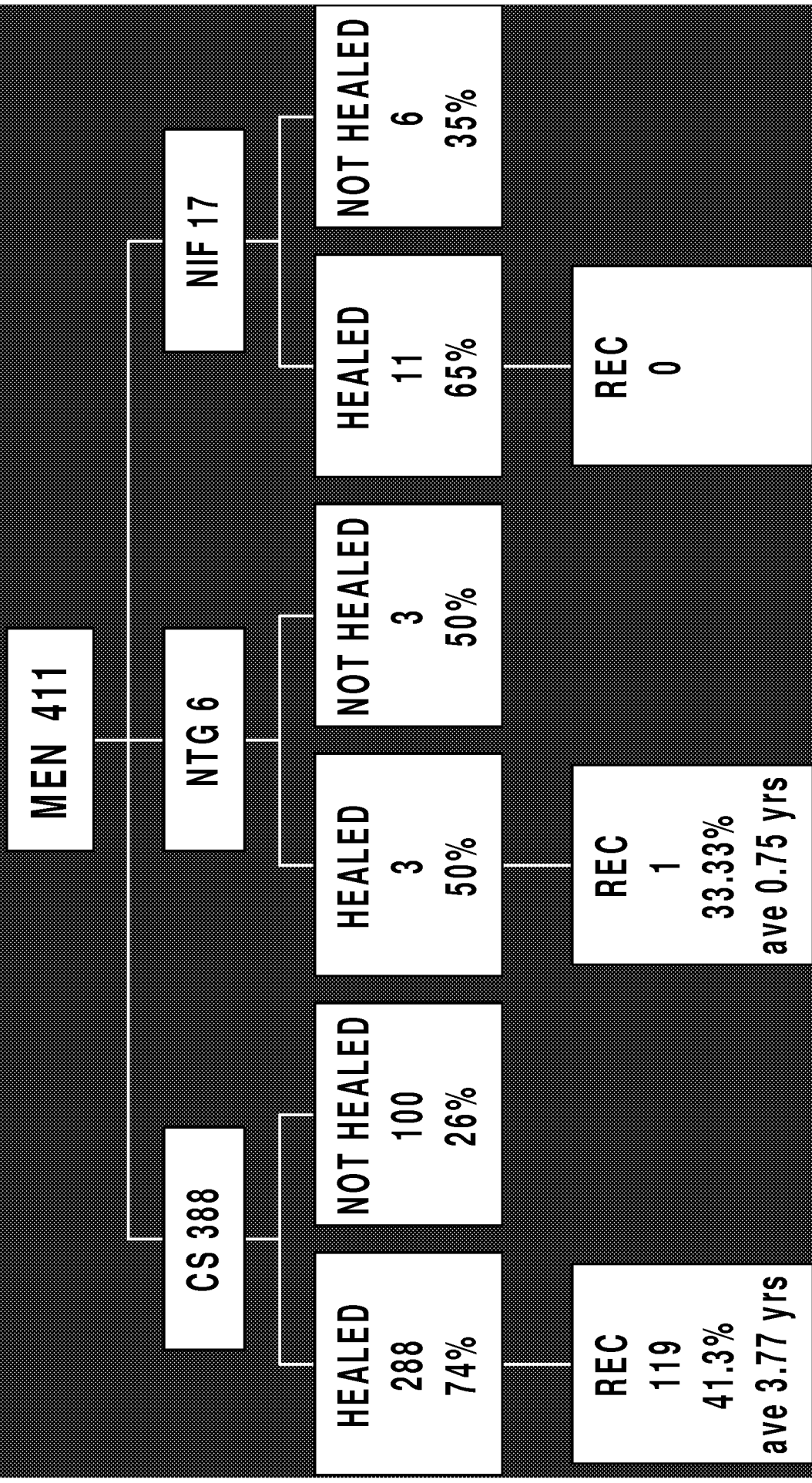
Results

902 patients with acute fissures

- 411 men(46%)
- average age 47
- 60 anterior (15%)
- 341 posterior (83%)
- 10 both anterior and posterior (2%)
- 491 women(54%)
- average age 44
- 175 anterior (36%)
- 289 posterior (59%)
- 27 both anterior and posterior (5%)

MEN

FIRST TREATMENT



MEN

FIRST RECURRENCE

RECURRENT
120

PLIS
1

NIF
2

NTG
1

CS
116

HEALED
1

NOT HEALED
1

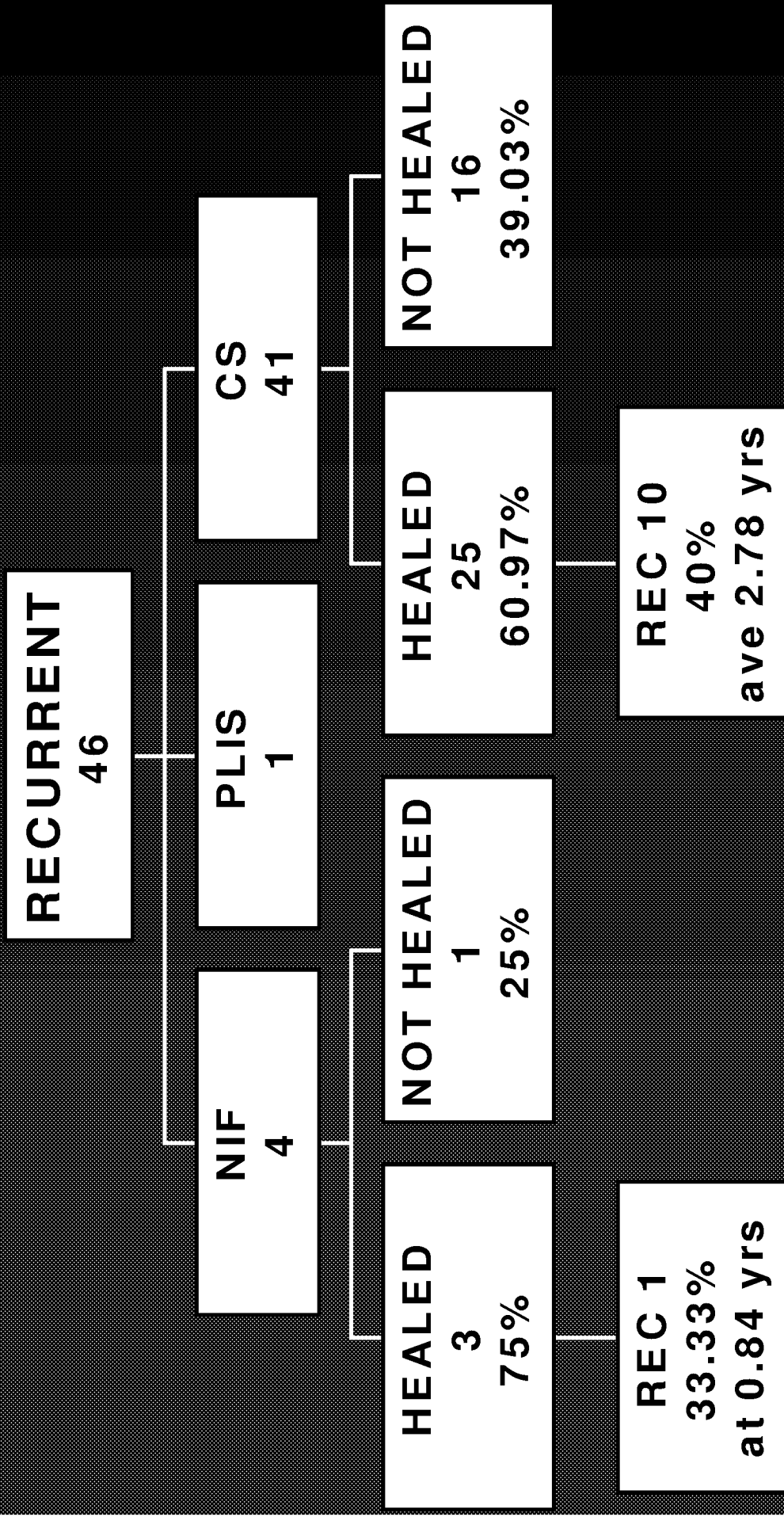
REC
1
at 0.75 yrs

HEALED
89
76.72%

NOT HEALED
27
23.28%

REC
45
50.56%
ave 2.5 yrs

MEN SECOND RECURRENT



MEN

THIRD RECURRENCE

RECURRENT

11

CS 7

PLIS 3

HEALED

4

57.14%

NOT HEALED

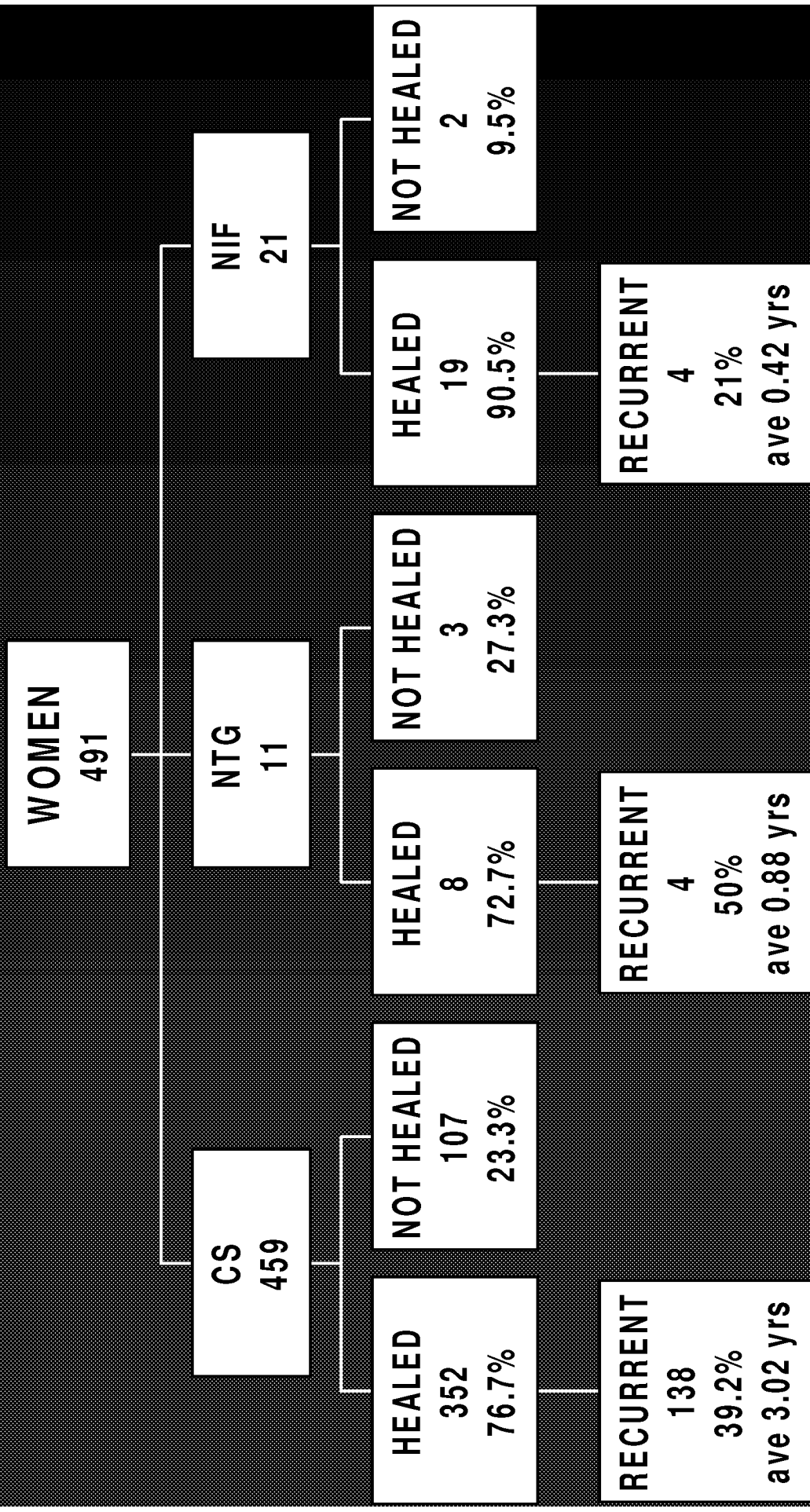
3

42.86%

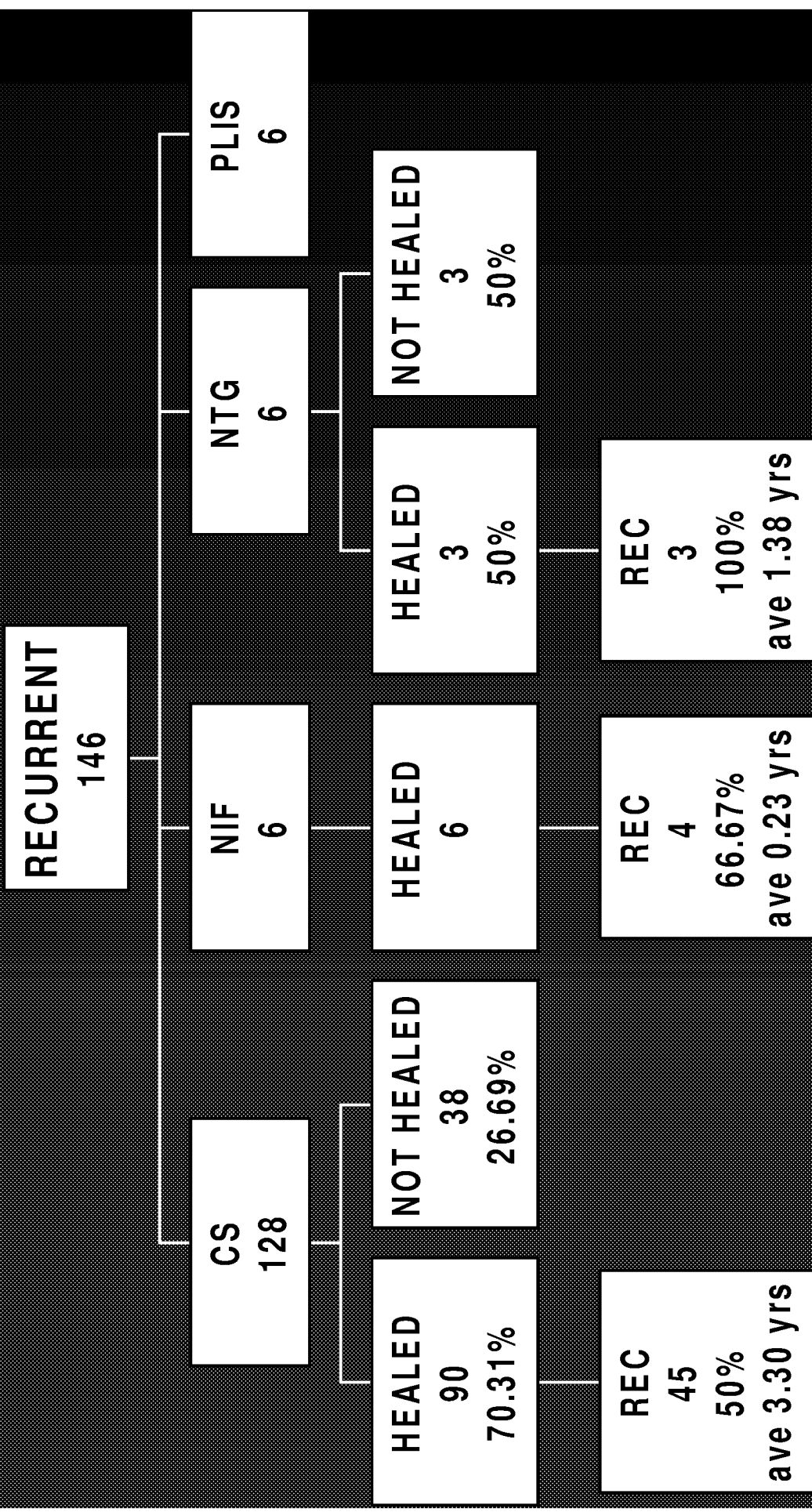
REC 1

25%

WOMEN FIRST TREATMENT

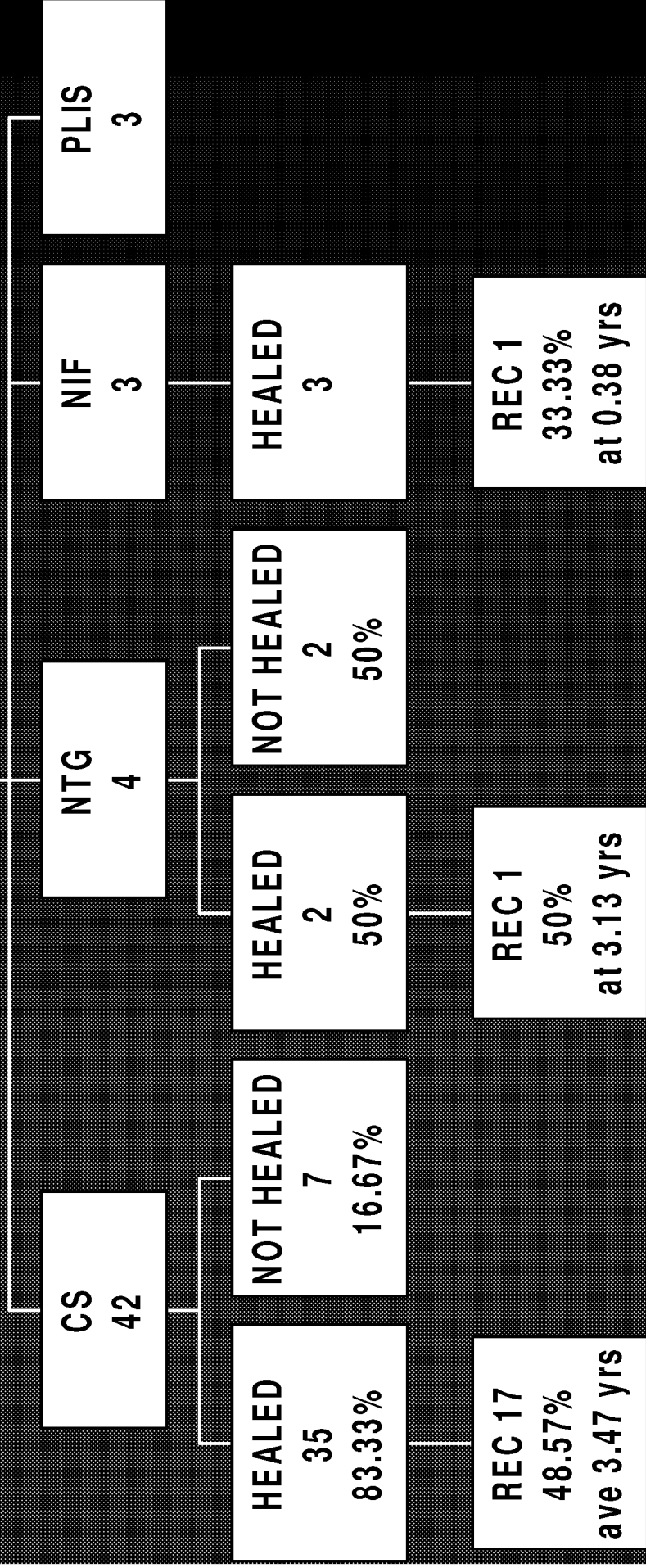


WOMEN FIRST RECURRENCE

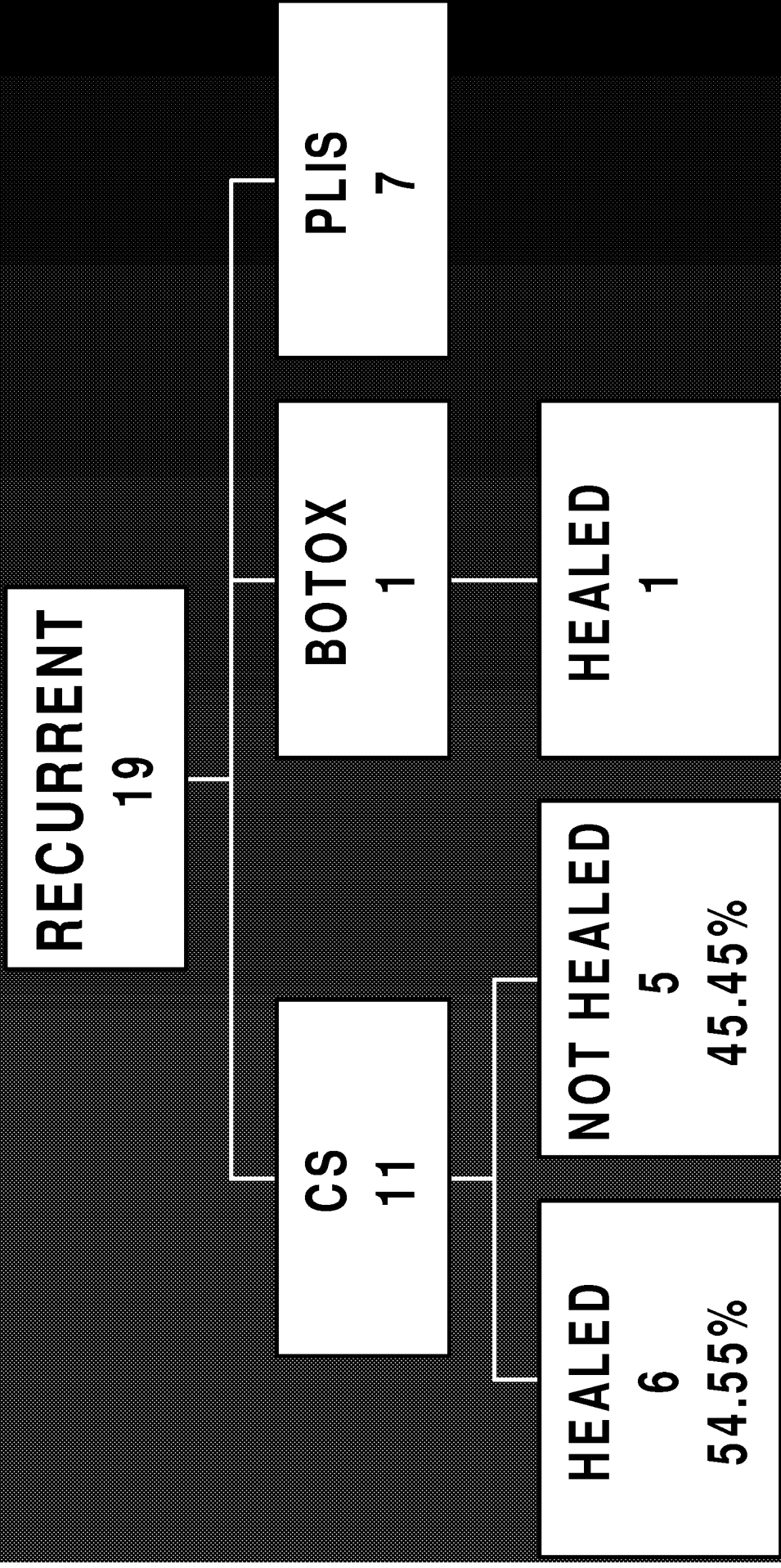


WOMEN SECOND RECURRENT

RECURRENT
52



WOMEN THIRD RECURRENCE

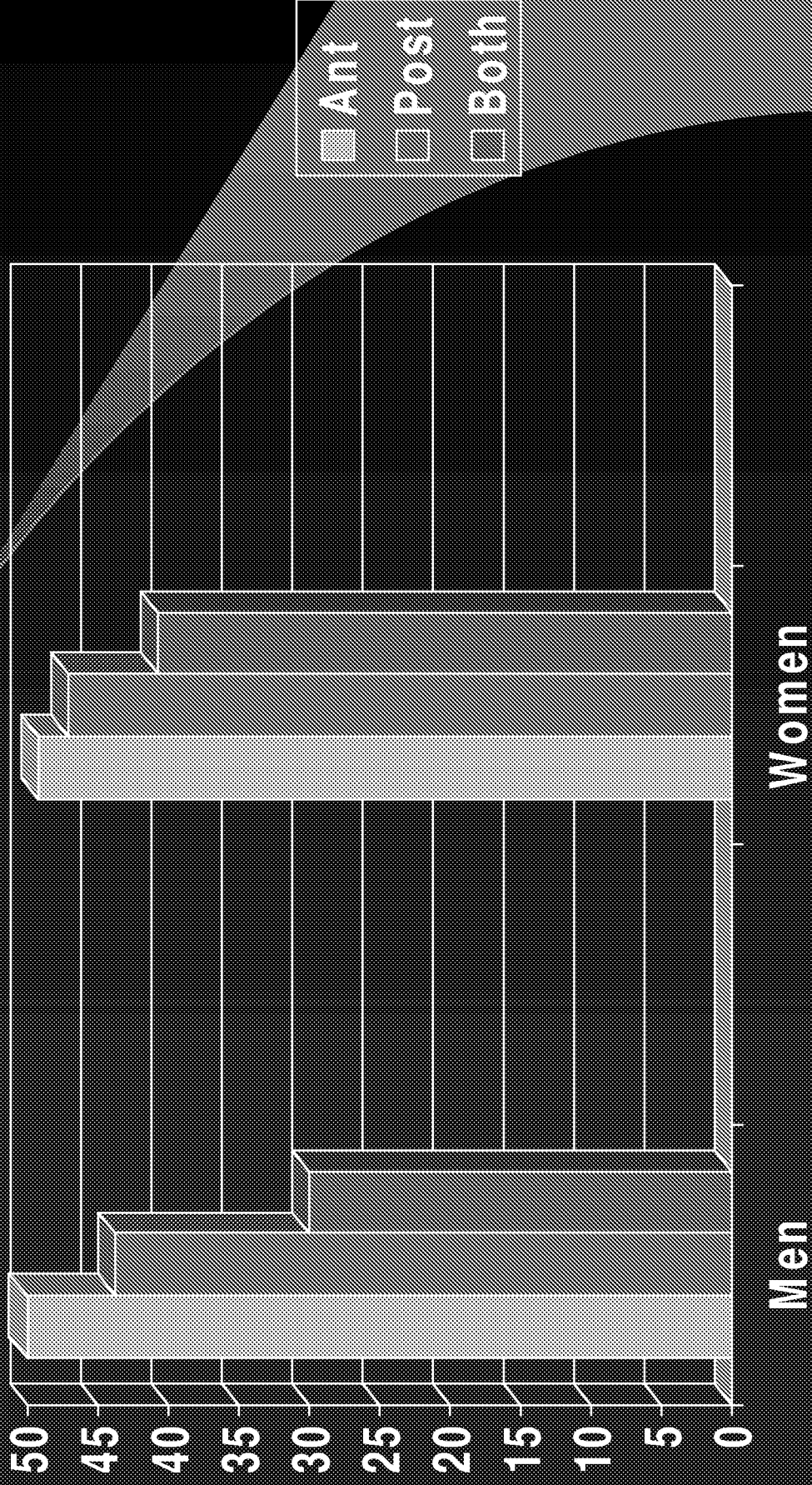


First Course of Treatment

Response by Site

- **Men**
 - anterior fissures responded in 50%
 - posterior fissures in 44%
 - both ant/post in 30%
- **Women**
 - anterior fissures responded in 49%
 - posterior fissures in 47%
 - both ant/post in 41%

RESPONSE BY SITE



Overall Success

First Course of Treatment

- CS 45% (383/847)
- NTG 35% (6/17)
- NIF 68% (26/38)

Overall Success

Second Course of Treatment

- CS 39% (89/229)
- NTG 33% (8/24)
- NIF 65% (13/20)
- Botox 83% (5/6)

Overall Success

Third Course of Treatment

- CS 40% (34/84)
- NTG 33% (2/6)
- NIF 67% (8/12)
- Botox 67% (2/3)

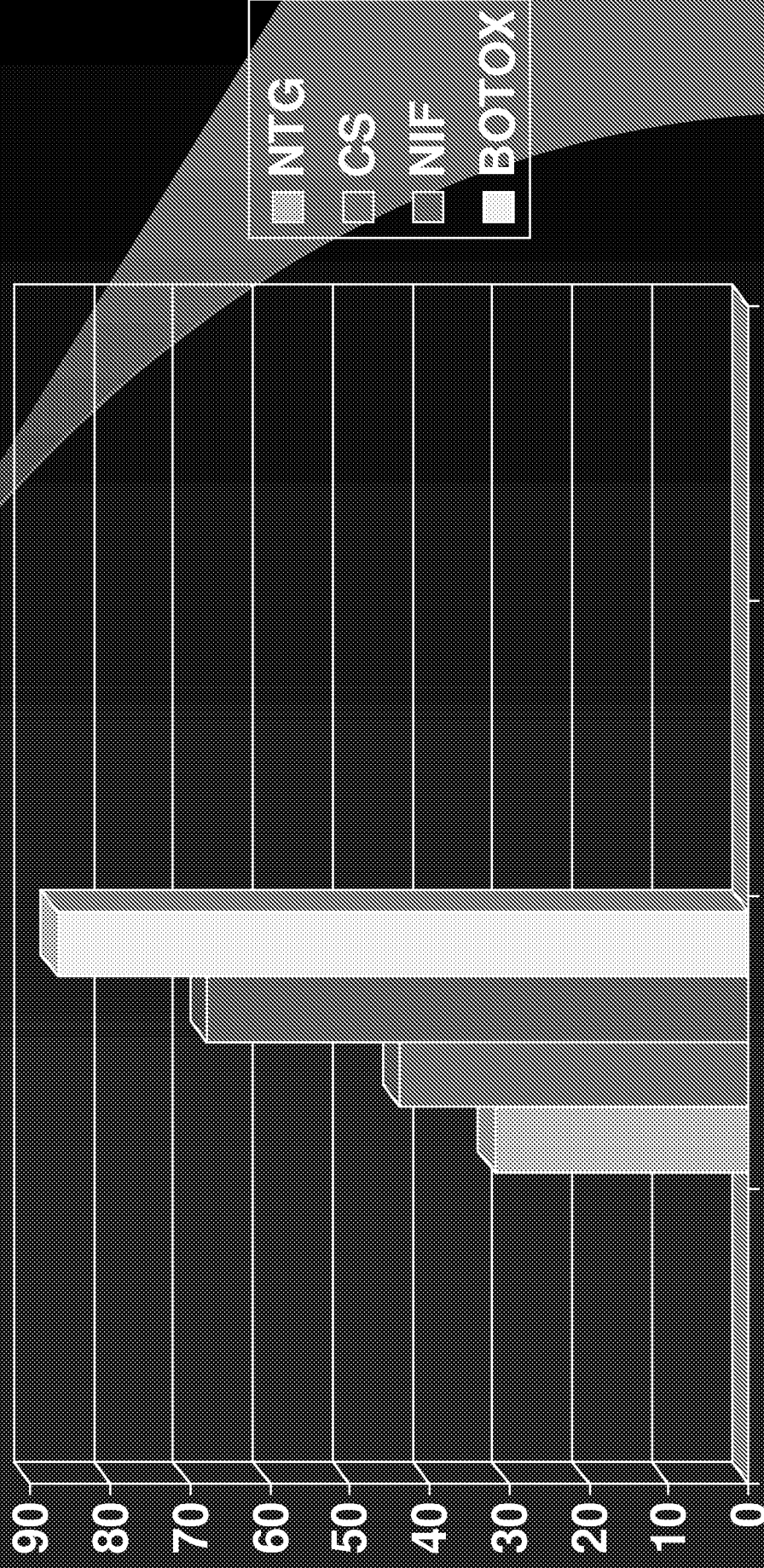
Overall Results

- **CS** 44% (526/1203)
- **NTG** 32% (16/51)
- **NIF** 68% (53/78)
- **Botox** 87% (13/15)
- **PLIS** 88%

CHI SQUARE ANALYSIS

- CS
 - Equivalent to NTG $p= 0.25$
 - Inferior to NIF $p= 0.02$
 - Likely inferior to BOTOX $p= 0.07$
- NIF superior to NTG $p= 0.02$
- BOTOX superior to NTG $p= 0.03$
- NIF equivalent to BOTOX $p= 0.56$

OVERALL RESULTS



SPHINCTEROTOMY

- Overall: 280/902 31%
- No response: 192/228 84%
- Recurrences: 88/394 22%

CONCLUSIONS

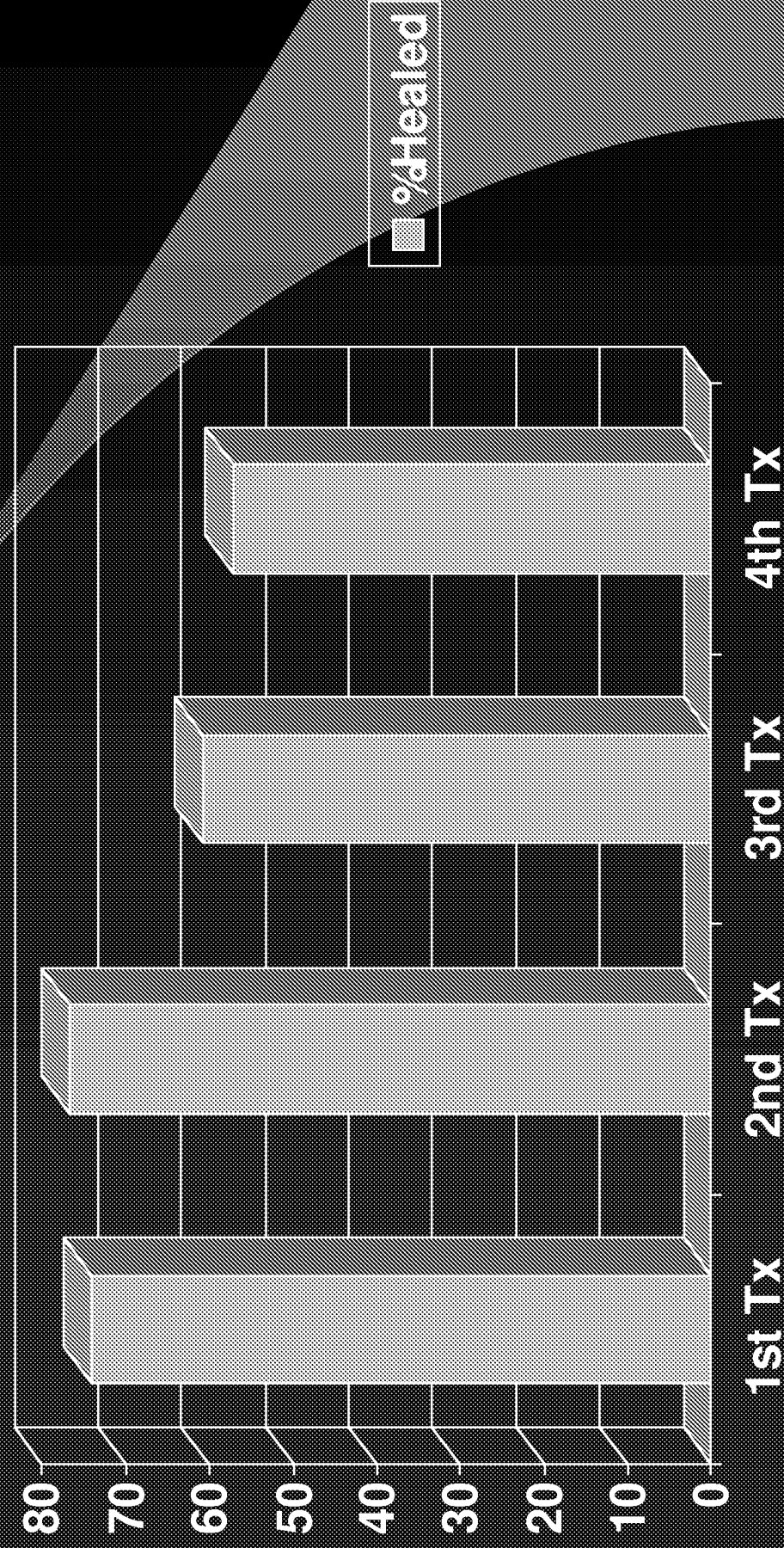
- Anterior fissures are more common in both men and women than traditionally reported
- Anterior fissures seem to respond better to medical management than do posterior fissures
- Patients with both anterior and posterior fissures at presentation are less likely to respond to medical management.

CONCLUSIONS

- NTG consistently gave inferior results when compared to other medical treatments
- NIF and Botox gave promising results but long-term follow-up is needed
- As the number of recurrences increased, the efficacy of medical treatment declined

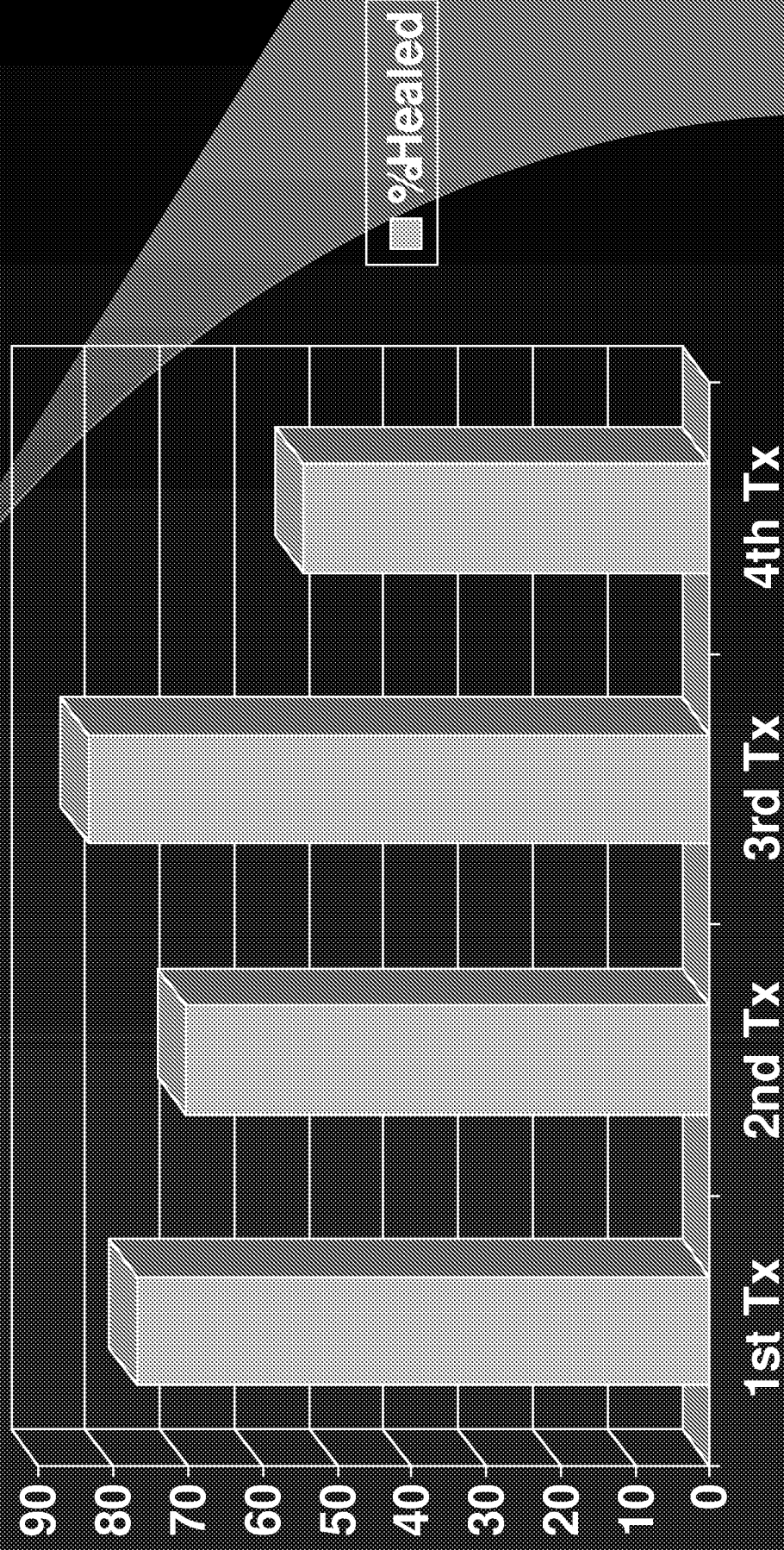
Efficacy of Medical Treatment


MEN



Efficacy of Medical Treatment

Women





Thank You